In the claims:

Please amend the claims as indicated below.

1. (Currently Amended) An apparatus for chemical mechanical polishing of a wafer, comprising:

(a) a platen supporting a polishing surface;

(b) a chuck to hold the wafer against the polishing surface;

(c) a motor coupled to at least one of the polishing surface and the chuck to generate relative motion therebetween; and

(c) an endpoint detector, comprising

(c1) ~~a laser interferometer to generate a laser beam that is directed towards the wafer and to detect light reflected from the wafer, and~~

~~(c2) a hole formed in the platen through which the laser beam passes to reflect off a section of the wafer when the hole is positioned adjacent the section of the wafer~~ a light source operable to generate a light beam that is directed through the polishing surface to the wafer and produce, from the light beam that is directed through the polishing surface, a light beam reflected from the wafer, and

(c2) a receiver operable to receive the light beam reflected from the wafer, wherein the endpoint detector is operable to determine, based on the light beam reflected from the wafer, when an end point is reached.

2. (Currently Amended) The apparatus of claim 1, wherein ~~the hole is filled with a portion of a fiber-optic cable~~the light source is a laser source and the light beam is a laser beam ~~further comprising:~~

~~a fiber optic cable configured for conveying the laser beam~~.

3. (Currently Amended) A chemical mechanical polisher, comprising:

a polishing surface that is movable relative to a substrate;

at least one light source operable to transmit light through the polishing surface to a film on the substrate and produce, from the light that is transmitted through the polishing surface,

light reflected from the film on the substrate; and

at least one device operable to detect a~~that detects interferometric~~ change in the light reflected from the film on the substrate and determine, based on the detected change, when an end point is reached ~~reflected light generated when light is transmitted through the polishing surface to the film~~.

~~4~~. (Currently Amended) The chemical mechanical polisher of claim 3, wherein the at least one device comprises a detector to detect ~~said~~ interferometric change in the light reflected from the film and an analyzer ~~for controlling~~to control the chemical mechanical polisher in response to the detected interferometric change.

5. (Currently Amended) The chemical mechanical polisher of claim 4, wherein the analyzer is operable to analyzes interferometric change in the ~~reflected~~ light reflected from the film to determine a change in dimension of the film.

6. (Currently Amended) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyzes interferometric change in the ~~reflected~~ light reflected from the film using interferometry at one wavelength.

7. (Currently Amended) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyzes interferometric change in the ~~reflected~~ light reflected from the film using spectrophotometry over a continuous range of wavelengths.

8. (Currently Amended) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyzes interferometric change in the ~~reflected~~ light reflected from the film to determine a change in thickness or planarity of the film.

9. (Currently Amended) The chemical mechanical polisher of claim 3, wherein ~~incident and reflected light~~the light transmitted through the polishing surface and the light reflected from the

film are transmitted through a rotating fiber optic cable embedded in a rotating platen below the polishing pad.

10. (Currently Amended) The chemical mechanical polisher of claim 3, wherein ~~incident light is transmitted~~the at least one light source is operable to transmit light to only ~~to~~ a section of the film.

11. (Currently Amended) The chemical mechanical polisher of claim 3, wherein ~~incident light is transmitted~~ the light source is operable to transmit light to more than one section of the film.

12. (Currently Amended) The chemical mechanical polisher of claim 3, wherein the light source is operable to produces a light of at least one wavelength between 200 and 11,000 nanometers.

13. (Currently Amended) The chemical mechanical polisher of claim 3, wherein the light source is operable to produces laser light.

14. (Withdrawn) A method of chemical mechanical polishing, comprising:
holding a substrate against a polishing surface;
moving the polishing surface relative to the substrate to polish a film on the substrate;
illuminating at least one section of the film with light transmitted through the moving polishing surface during polishing of said at least one section; and
detecting interferometric change in light reflected from the at least one illuminated section of the film that passes back through the polishing surface.

15. (Withdrawn) The method of claim 14, wherein the illuminating step includes generating a light beam from at least one light source that illuminates the at least one section of the film and the detecting step includes detecting a reflected portion of the light beam with at least one device that detects the interferometric change.

16. (Withdrawn) The method of claim 15, wherein said interferometric change is detected when said at least one section of the film passes over said at least one device.

17. (Withdrawn) The method of claim 15, wherein light from the light source that illuminates said at least one section and reflected light pass through a fiber optic cable embedded in the polishing surface.

18. (Withdrawn) The method of claim 18, further comprising controlling thickness change in the film in response to the detected interferometric change.

19. (Withdrawn) The method of claim 15, wherein the light directed through the polishing pad to the at least one section of the film comprises at least one wavelength between 200 and 11,000 nanometers, and the interferometric change in the reflected light is analyzed over one or more wavelengths.

20. (Withdrawn) The method of claim 14, wherein more than one section of the film is illuminated.

21. (Withdrawn) The method of claim 14, wherein polishing the film comprises reducing the thickness of the film or planarizing the film.

22. (Withdrawn) The method of claim 14, wherein a polishing endpoint is detected based on said interferometric change in the reflected light.

23. (Withdrawn) A method of claim 22, wherein the film is a metal film.

24. (Withdrawn) The method of claim 14, wherein the film is formed over a substrate.

25. (Withdrawn) The method of claim 24, wherein the substrate comprises at least one of an insulating material, a conductive material, a semiconductive material, a silicon wafer, a gallium arsenide wafer and a silicon on insulator.

26. (Withdrawn) The method of claim 24, wherein the substrate comprises a semiconductor device over a silicon wafer.

27. (Withdrawn) The method of claim 14, wherein the film comprises at least one of an SiO_2 layer, a spin-on-glass layer, a tungsten layer, an aluminum layer, a silicon layer and a photoresist layer.

28. (Withdrawn) The method of claim 14, wherein the film comprises a dielectric layer over a semiconductor substrate.

29. (Withdrawn) The method of claim 14, wherein the film comprises at least one dielectric layer over at least one metal layer.

30. (Withdrawn) The method of claim 14, wherein the film comprises a part of a semiconductor device or an integrated circuit.

31. (Withdrawn) The method of claim 14, wherein said at least one section of the film is illuminated with light including at least one wavelength between 200 and 11,000 nanometers.

32. (Withdrawn) A method of making a planarized substrate comprising
polishing a film on a substrate with a moving polishing pad;
illuminating at least one section of the film with light transmitted through the moving polishing pad during polishing of said at least one section; and
detecting interferometric change in light reflected from the at least one illuminated section of the film.

33. (Currently Amended) A chemical mechanical polisher, comprising:

a polishing material having at least one optical access through which light can be transmitted to a portion of a film on a substrate;

a platen to support the polishing material; ~~and~~

an interferometer ~~to direct a light beam through the polishing material and detect interferometric change in reflected light~~operable to detect interferometric changes in light reflected from the film and passing through the optical access in the polishing material; and

a device operable to determine, based on the detected interferometric changes, when an end point is reached.

34. (Original) The chemical mechanical polisher of claim 33, wherein the at least one optical access in the polishing pad is transmissive to light comprising at least one wavelength between 200 and 11,000 nanometers.

35. (Currently Amended) The chemical mechanical polisher of claim 33, wherein the at least one optical access ~~is~~includes a portion of a fiber optic cable.

36. (Original) The chemical mechanical polisher of claim 33, further comprising a focusing lens to enhance transmission of light passing between the polishing material and the film on the substrate.

37. (New) The apparatus of claim 1, wherein:

the receiver is an interferometer.

38. (New) The apparatus of claim 1, further comprising:

a fiber optic cable situated to convey light to and from the wafer.

39. (New) The apparatus of claim 1, wherein:

the fiber optic cable is situated to convey light from the light source through the polishing surface to the wafer.

40. (New) The apparatus of claim 1, wherein:

the fiber optic cable is situated to convey light reflected from the wafer to the receiver.

41. (New) The apparatus of claim 1, wherein:

the fiber optic cable is bifurcated.